REMARKS

Claim 1 has been amended and claim 9 has been cancelled.

The Examiner has objected to the use of the term "specimens" based upon what is suggested to be the accepted meaning of the word specimen. Applicant urges that the generally accepted technical meaning of the word specimen is much broader. A better definition is found in the McGraw-Hill Dictionary of Scientific and Technical Terms as follows: "[SCI TECH] 1. An item representative of others in the same class or group. 2. A sample selected for testing, examination, or display." A copy of this page of the dictionary is attached.

Nevertheless, the term "specimens" has been limited somewhat to now read "specimens consisting essentially of compounds and fragments thereof". This should overcome any possible question as to the meaning and use of the term.

The Examiner has objected to the definition of the variables N and r.

The limitation of claim 9 has been incorporated into claim 1 further limiting the definition of the variable N and r.

The Examiner has suggested the claims should be limited to use with a mass spectrometer. There is no reason to believe that the method would not work with other analytical instruments which permit fluid streams to be sampled and combined. The Examiner has presented no evidence to meet the burden of establishing a basis for this rejection. Nevertheless, the Applicant has amended claim 1 to provide that the analyzing instrument be one in which "multiple fluid streams can be sampled and combined." Support for this language is found at the end of the specification.

In view of the foregoing amendments and remarks, it is urged this case is now in condition for allowance.

Respectfully submitted,

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McGraw-Hill DICTIONARY OF SCIENTIFIC AND TECHNICAL TERMS

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In addition, material has been drawn from the following references: R. E. Huschke, *Glossary of Meteorology,* American Meteorological Society, 1959; *U.S. Air Force Glossary of Standardized Terms,* AF Manual 11–1, vol. 1, 1972; *Communications-Electronics Terminology,* AF Manual 11-1, vol. 3, 1970; W. H. Allen, ed., *Dictionary of Technical Terms for Aerospace Use,* 1st ed., National Aeronautics and Space Administration, 1965; J. M. Gilliland, *Solar-Terrestrial Physics: A Glossary of Terms and Abbreviations,* Royal Aircraft Establishment Technical Report 67158, 1967; *Glossary of Air Traffic Control Terms,* Federal Aviation Agency; *A Glossary of Range Terminology, White Sands Missile Range, New Mexico,* National Bureau of Standards, AD 467–424; *A DOD Glossary of Mapping, Charting and Geodetic Terms,* 1st ed., Department of Defense, 1967; P. W. Thrush, comp. and ed., *A Dictionary of Mining, Mineral, and Related Terms,* Bureau of Mines, 1968; *Nuclear Terms: A Glossary,* 2d ed., Atomic Energy Commission; F. Casey, ed., *Compilation of Terms in Information Sciences Technology,* Federal Council for Science and Technology, 1970; *Glossary of Stinfo Terminology,* Office of Aerospace Research, U.S. Air Force, 1963; *Naval Dictionary of Electronic, Technical, and Imperative Terms,* Bureau of Naval Personnel, 1962; *ADP Glossary,* Department of the Navy, NAVSO P-3097.

McGRAW-HILL DICTIONARY OF SCIENTIFIC AND TECHNICAL TERMS,
Third Edition

34567890 DODO 891098765

ISBN 0-07-045269-5

Library of Congress Cataloging in Publication Data

McGraw-Hill dictionary of scientific and technical terms.

1. Science—Dictionaries. 2. Technology—Dictionaries. I. Parker, Sybil P.
[DNLM: 1. Science—Dictionaries. 2. Technology—Dictionaries. Q 123 M147]
Q123.M34 1983 503'.21 83-11302
ISBN 0-07-045269-5

carries several known recessive mutants in a homozygous condition is crossed with a nonmutant strain treated to induce mutations in its germ cells; induced recessive mutations allelic with those of the test strain will be expressed in the progeny.

specific mass shift [NUC PHYS] The portion of the mass shift that is produced by the correlated motion of different pairs of atomic electrons and is therefore absent in one-electron systems.

specific power [NUCLEO] The power produced per unit mass of fuel present in a nuclear reactor.

specific productivity index [PETRO ENG] Barrels per day of oil produced per pound decline in bottom-hole pressure per foot of effective reservoir thickness.

specific propellant consumption *See* specific fuel consumption.

specific reluctance *See* reluctivity.

specific repetition rate [ELECTR] The pulse repetition rate of a pair of transmitting stations of an electronic navigation system using various rates differing slightly from each other, as in loran.

specific resistance *See* electrical resistivity.

specific retention volume [ANALY CHEM] The relationship among retention volume, void volume, and adsorbent weight, used to standardize gas chromatography adsorbents by the elution of a standard solute by a standard eluent from the adsorbent under test.

specific rotation [OPTICS] The calculated rotation of light passing through a solution as related to the solution volume and depth, the amount of solute, and the observed optical rotation at a given wavelength and temperature.

specific routine [COMPUT SCI] Computer routine to solve a particular data-handling problem in which each address refers to explicitly stated registers and locations.

specific speed [MECH ENG] A number, N_s, used to predict the performance of centrifugal and axial pumps or hydraulic turbines: for pumps, $N_s = N\sqrt{Q}/H^{3/4}$; for turbines, $N_s = N\sqrt{P}/H^{5/4}$, where N_s is specific speed, N is the rotational speed in revolutions per minute, Q is the rate of flow in gallons per minute, H is head in feet, and P is shaft horsepower.

specific surface [CHEM ENG] The surface area per unit weight or volume of a particulate solid; used in size-reduction (crushing and grinding) calculations.

specific susceptibility *See* mass susceptibility.

specific thrust *See* specific impulse.

specific viscosity [FL MECH] The specific viscosity of a polymer is the relative viscosity of a polymer solution of known concentration minus 1; usually determined at low concentration of the polymer; for example, 0.5 gram per 100 milliliters of solution, or less.

specific volume [MECH] The volume of a substance per unit mass; it is the reciprocal of the density. Abbreviated sp vol.

specific-volume anomaly [OCEANOGR] The excess of the actual specific volume of the sea water at any point in the ocean over the specific volume of sea water of salinity 35 parts per thousand (‰) and temperature 0°C at the same pressure. Also known as steric anomaly.

specific weight [MECH] The weight per unit volume of a substance.

specific yield [HYD] The quantity of water which a unit volume of aquifer, after being saturated, will yield by gravity; it is expressed either as a ratio or as a percentage of the volume of the aquifer; specific yield is a measure of the water available to wells.

specimen [SCI TECH] **1.** An item representative of others in the same class or group. **2.** A sample selected for testing, examination, or display.

speck [PL PATH] A fungus or bacterial disease of rice characterized by speckled grains.

speckle [OPTICS] A phenomenon in which the scattering of light from a highly coherent source, such as a laser, by a rough surface or inhomogeneous medium generates a random-intensity distribution of light that gives the surface or medium a granular appearance.

speckle interferometry [OPTICS] The use of speckle patterns in the study of object displacements, vibration, and distortion, and in obtaining diffraction-limited images of stellar objects.

specs *See* specification.

spectacle [ZOO] A colored marking in the form of rings around the eyes, as in certain birds, reptiles, and mammals (as the raccoon).

spectacle frame [NAV ARCH] A frame at or close to the sternposts of a twin-screw ship, through which pass propeller shafts.

spectacle stone *See* selenite.

spectral bandwidth [SPECT] The minimum radiant-energy bandwidth to which a spectrophotometer is accurate; that is, 1–5 nanometers for better models.

spectral centroid [OPTICS] An average wavelength; specifically, for a light filter or other light-transmitting device, a weighted average of the spectral energy distribution of the incident light, the transmittance of the device, and the luminosity function.

spectral characteristic [OPTICS] The relation between wavelength and some other variable, such as between wavelength and emitted radiant power of a luminescent screen per unit wavelength interval.

spectral classification [ASTRON] A classification of stars by characteristics revealed by study of their spectra; the six classes B, A, F, G, K, and M include 99% of all known stars.

spectral color [OPTICS] **1.** A color corresponding to light of a pure frequency; the basic spectral colors are violet, blue-green, yellow, orange, and red. **2.** A color that is represented by a point on the chromaticity diagram that lies on a straight line between some point on the spectral color (first definition) locus and the achromatic points; purple, for example, is not a spectral color.

spectral density [ELECTROMAG] *See* spectral energy distribution. [MATH] The density function for the spectral measure of a linear transformation on a Hilbert space. [SYS ENG] *See* frequency spectrum.

spectral directional reflectance factor [ANALY CHEM] In spectrophotometric colorimetry, the ratio of the energy diffused in any desired direction by the object under analysis to that energy diffused in the same direction by an ideal perfect (energy) diffuser.

spectral energy distribution [ELECTROMAG] The power carried by electromagnetic radiation within some small interval of wavelength (of frequency) of fixed amount as a function of wavelength (of frequency). Also known as spectral density.

spectral extinction [OPTICS] The selective absorption of different wavelengths of light as a function of depth in water.

spectral factorization [MATH] A process sometimes used in the study of control systems, in which a given rational function of the complex variable s is factored into the product of two functions, $F_R(s)$ and $F_L(s)$, each of which has all of its poles and zeros in the right and left half of the complex plane, respectively.

spectral function [MATH] In the theory of stationary stochastic processes, the function

$$F(y) = (2/\pi)\int_0^\infty \rho(x)(\sin xy/x)(dx),\ 0 \le y \le \infty$$

where $\rho(x)$ is the autocorrelation function of a stationary time series.

spectral hygrometer [ENG] A hygrometer which determines the amount of precipitable moisture in a given region of the atmosphere by measuring the attenuation of radiant energy caused by the absorption bands of water vapor; the instrument consists of a collimated energy source, separated by the region under investigation and a detector which is sensitive to those frequencies that correspond to the absorption bands of water vapor.

spectral irradiance [OPTICS] The density of the radiant flux that is incident on a surface per unit of wavelength.

spectral line [SPECT] A discrete value of a quantity, such as frequency, wavelength, energy, or mass, whose spectrum is being investigated; one may observe a finite spread of values resulting from such factors as level width, Doppler broadening, and instrument imperfections. Also known as spectrum line.

spectral locus *See* spectrum locus.

spectral luminosity classification *See* MK system.

spectral luminous efficacy [OPTICS] The ratio of the luminous flux emitted by a monochromatic light source in lumens to its radiant flux in watts, as a function of the wavelength of the emitted light.

spectral luminous efficiency *See* luminosity function.

spectral measure [MATH] A measure on the spectrum of an operator on a Hilbert space whose values are projection opera-